



Packing Data

PK

Allen-Bradley ControlView™ Documentation Set

What This Package Contains

ControlView Man/Machine Interface software and user's manuals are available in documentation sets or individually. This table shows the software and manuals you get when you order ControlView software by these catalog numbers:

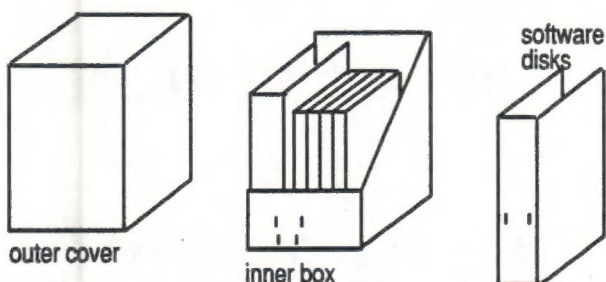
Publication:	Cat. No.	Pub. No.	6195-CVD	6195-CVU	6190-CVC
ControlView Core	6190-CVC	6190-6.5.1	√	√	√
ControlView Alarming	6190-ALM	6190-6.5.4	√	√	
ControlView A-B Drivers	6190-ABD	6190-6.5.5	√	√	
ControlView Data Logger	6190-DLG	6190-6.5.7	√	√	
ControlView Event Detector	6190-EVD	6190-6.5.10	√	√	
ControlView Derived Tags	6190-DTM	6190-6.5.11	√	√	
ControlView Trending	6190-TND	6190-6.5.6	√		
ControlView Mouse GRAFIX	6190-MGX	6190-6.5.3	√		
ControlView Reporting	6190-REP	6190-6.5.8	√		
ControlView Modbus Driver	6190-MOD	6190-6.5.16	√		
ControlView C-ToolKit	6190-CTK	6190-6.5.2			
ControlView Networking	6190-NET	6190-6.5.9			
ControlView Batch Management	6190-BAT	6190-6.5.18			

Documentation Sets

When you order:

- 6195-CVD with standard options
- 6195-CVU with standard options
- 6190-CVC with or without options

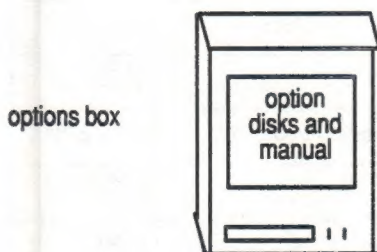
Your software and user's manuals are packaged in a library box. This is how your documentation set will look:



You can add more options to your 6190-CVC at any time.

Individual Options

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ControlView™ Release 2.11 Documentation Set

What This Package Contains

ControlView Man/Machine Interface software and user's manuals are available in documentation sets or individually. This table shows what you get when you order these documentation sets:

- ControlView Core Software (6190-CVC)
- ControlView Universal Software (6195-CVU)
- ControlView Developers Software (6195-CVD)

Publication:	Pub. No.	Release	Cat. No.	6190-CVC	6195-CVU	6195-CVD
ControlView Core	6190-6.5.1	2.11	6190-CVC	√	√	√
ControlView Core Release Notes 2.11	6190-6.5.1-RN3			√	√	√
ControlView System Documentor*	6190-6.5.22			√	√	√
ControlView Alarming	6190-6.5.4	2.11	6190-ALM		√	√
ControlView A-B Drivers	6190-6.5.5	2.11	6190-ABD		√	√
ControlView Data Logger	6190-6.5.7	2.11	6190-DLG		√	√
ControlView Event Detector	6190-6.5.10	2.11	6190-EVD		√	√
ControlView Derived Tags	6190-6.5.11	2.11	6190-DTM		√	√
ControlView Trending	6190-6.5.6	2.11	6190-TND			√
ControlView Mouse GRAFIX	6190-6.5.3	2.11	6190-MGX			√
ControlView Mouse GRAFIX Release Notes 2.11	6190-6.5.3-RN1	2.11				
ControlView Reporting	6190-6.5.8	2.11	6190-REP			√
ControlView Statistical Process Control	6190-6.5.20	2.11	6190-SPC			√
ControlView Statistical Process Control Release Notes 2.11	6190-6.5.20-RN1					√
ControlView Batch Management	6190-6.5.18	1.1	6190-BAT			√
ControlView C-Toolkit	6190-6.5.2	2.03	6190-CTK			√
ControlView C-Toolkit Release Notes 2.03	6190-6.5.2-RN2					√
ControlView Networking	6190-6.5.9	2.01	6190-NET			
ControlView Networking Release Notes 2.01	6190-6.5.9-RN2					
ControlView Technical Notes	6190-6.5.12					
ControlView Modbus Driver	6190-6.5.16	2.11	6190-MOD			

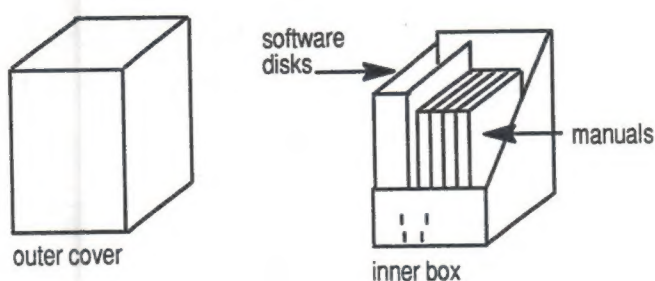
*System Documentor is a part of ControlView Core software. The System Documentor manual supplements your Core manual.

Documentation Sets

When you order:

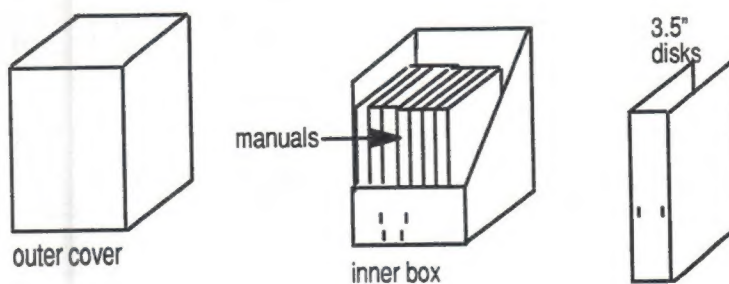
- 6190-CVC with or without options
- 6195-CVU with standard options

Your software disks, release notes and registration cards are in the software binder. Your user's manuals are packaged next to the binder in a library box. This is how your documentation set will look:



When you order 6195-CVD with standard options:

Your software (3.5" disks), release notes, and registration cards are in the software binder. Your user's manuals are packaged in the library box. This is how your documentation set will look:

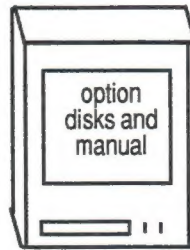


You can add more options to your 6190-CVC at any time.

Individual Options

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options box





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Release Notes ControlView 2.11

Contents of this Document

This document entirely replaces the ControlView Release Notes, publication 6190-6.5.1 RN1, November 1990, and publication 6190-6.5.1 RN2, February 1991.

This document supplements the information found in the following ControlView 2.0 User's Manuals:

- A-B Drivers, Publication 6190-6.5.5—November, 1990
- Mouse GRAFIX Editor, Publication 6190-6.5.3—November, 1990
- Data Logger, Publication 6190-6.5.7—November, 1990
- Reporting, Publication 6190-6.5.8—November, 1990
- Trending, Publication 6190-6.5.6—November, 1990

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**New Features in
ControlView 2.11**

Core Features

- **Mouse Operation**
You can use a mouse to configure and operate ControlView. To allow mouse use, every window in ControlView has changed in a minor way.
- **Touch Screen Operation**
You can use a touch screen to operate a ControlView application.
- **New Commands**
UNDEFINE allows you to remove symbols created with the DEFINE command.
MOUSECONFIG is used to set up the mouse.
TOUCHCONFIG, TOUCHON, and TOUCHOFF are used to set up and use a touch screen with ControlView.
WINDOWCONFIG sets up a new system of automatically closing windows when new windows open, to conserve video memory.
MENUBAR allows you to change the menu system from full screen to a single menu bar at the top of the screen, with your own graphics underneath.
- **Multiple Commands**
More than one command can be run from a single line, by separating the commands with a semicolon (;). This feature can be used on the Command Line, in key definition files and anywhere single line commands can be run.
- **You can now store more than one ControlView configuration by specifying different directories.**

System Documentor Features

The System Documentor provides you with printed documentation of your complete ControlView installation, including the database, alarm setup, hardware and local area network setup. The System Documentor software is part of the ControlView Core, but for Release 2.11 is documented in a separate manual, the *System Documentor User's Manual*, Publication 6190-6.5.22. Refer to that manual for more details.

A-B Drivers Features

- PLC-5/40 and PLC-5/60 are now supported in native mode addressing. These PLCs are identical except for their memory and number of Input/Output racks: the PLC-5/40 can have up to 16 racks, while the PLC-5/60 can have up to 24 racks
- the SLC 500 family of programmable controllers are now supported via the DH-485 Communication Interface (cat. no. 1770-KF3, referred to as the KF3) and DH-485
- ControlView now supports the Allen-Bradley RS-485 Data Highway (cat. no. DH-485, referred to as DH-485) as well as Data Highway, Data Highway II and Data Highway Plus. DH-485 is essential for communicating with the SLC 500 family

Data Logger Features

Data Logger now supports logging on demand with the new DATALOGSNAPSHOT command. You can run a one-time data snapshot from the command line or a macro, or, with the C-Toolkit or Event Detector, you can log tag values for a model each time an event occurs.

SPC Features

The Statistical Process Control Option is now available, which allows you:

- statistical analysis of current and historical data
- process data analysis and measurement
- histograms and \bar{x} & R charts
- monitoring for statistical alarms

ControlView Change History

ControlView has previously been released in Release 1.0 and Release 2.0. The improvements and additions in Release 2.0, which are incorporated in this release, include:

- PLC-5/250 native mode support
- structured tags in the database
- a new default format for alarm messages to work with the new Reporting option
- Derived Tag and Event Detector files moved to separate default directories (ACCESS\DT and ACCESS\EV, rather than ACCESS\DAT)
- new C-Toolkit functions for structured tags
- both foreground and background scan periods are configured individually for each scan class. Both Mouse GRAFIX and Trending use the foreground scan rate
- the Networking option
- the Reporting option
- the Batch Management option

Compatible Option Releases

Table 1
Option Releases Compatible with ControlView Core 2.11

Module	Cat. No.	Release
C-Toolkit	6190-CTK	2.0 or later
Networking	6190-NET	2.01
Batch	6190-BAT	1.1
Batch Keyboard	6721-BKBD	1.1
All other options		2.11

Since the release of ControlView 2.0, the C-Toolkit option has been released as Release 2.02. This release is compatible with Microsoft Professional C versions 5 or 6, and QuickC versions 1.0, 2.0 or 2.5.

Choose *View Revision Info* under Tools in the Setup menu to see the release numbers of your installed software.

Installing the Software

Instructions for installing ControlView for the first time are summarized below, with complete details given in the *ControlView Core User's Manual*, Chapter 2, *Installation*.

To upgrade to Release 2.11 from Release 2.0, follow the instructions on page 9. To upgrade from Release 1.0, follow the instructions on page 5.

First-Time Installation

Follow these steps to install ControlView for the first time:

1. Modify the CONFIG.SYS and AUTOEXEC.BAT files according to the instructions given on pages 2-5 and 2-6 of the *ControlView Core User's Manual*.
2. Install the Core and options onto the computer's hard disk using the INSTALL command.

Important: Do not install C-Toolkit, Batch software or the Batch Keyboard software as the *last* option. If you do, ControlView will produce this error message:

Couldn't execute 'A:DDC.EXE'

If you see this message, re-install any of the options other than C-Toolkit, Batch or Batch Keyboard. This will correct the fault.

3. There is a new field in the KT Configuration window that is not described in the *ControlView Core User's Manual*. If you're using a KT to connect to the Data Highway+, the new field requires you to specify a base address for the KT card. The address you choose must match the Address Switch setting on your card. Press **Enter** on the field and choose the appropriate address from the list that pops up.

Important: If you're using a KT2 card, leave this field blank.

Upgrading from ControlView 1.0 to 2.11

Important: Databases created with Release 1.0 software are not compatible with Release 2.11, and must be converted using the DB10EXP utility. Changes to the C-Toolkit require that all tasks written for ControlView 1.0 using the C-Toolkit be re-compiled and re-linked with the Release 2.02 C-Toolkit.

Release 1.0 application modules do not work with the Release 2.0 or 2.11 Core. You can verify what release your options are by choosing *View Revision Info* under Tools in the Setup Menu.

The following instructions provide additional information not included in the *ControlView Core User's Manual*, Chapter 2, *Installation*.

Follow these steps to upgrade to ControlView 2.11:

1. Be sure your CONFIG.SYS file contains the line
`STACKS = 0,0`
If this line does not appear, put it in. See the *ControlView Core User's Manual*, page 2-6, for examples.
2. If you use a custom STARTUP macro or TOPLEVEL macro you must:
 - a. Temporarily rename the STARTUP and TOPLEVEL files so that they will not be over-written when ControlView 2.11 is installed.
 - b. Modify the STARTUP macro by removing the BANNER command, if present. The BANNER command was an undocumented ControlView command present in the original ControlView 1.0 STARTUP macro. This command is not supported in ControlView 2.11 and will produce an error if still present in the macro.
3. Remove release 1.0 Core and options using the UNINSTAL command found on the original 1.0 disks. The UNINSTAL command removes the 1.0 software but does not remove any of the data files you have already created.
You will need disk 1 of the Core disk-set and disk 1 of each option. To remove the software:
 - a. Insert disk 1 of the ControlView 1.0 Core disk-set into a drive and log onto that drive.
 - b. Type the UNINSTAL command, naming the disk drive containing ControlView:
`UNINSTAL <location>`
 - c. Follow the instructions on the screen.

Example: Removing ControlView 1.0 Core and Options

To remove ControlView 1.0 from the C drive, insert disk 1 of the original 1.0 Core disk-set into drive A, and type:

A: *press Enter*

UNINSTAL C *press Enter*

Follow the instructions on the screen. When the Core software has been removed, you will be asked if you want to uninstall an option. Choose *Yes*, and repeat this process for each option.

4. Insert Disk 1 of the ControlView Core 2.11 disk-set into the disk drive and log onto that drive. Type the **INSTALL** command, naming the drive where ControlView 2.11 is to be installed:

INSTALL <location>

Follow the instructions on the screen. When the Core software has been installed, you will be asked if you want to install an option. If so, choose *Yes*, otherwise choose *No*. The process will repeat for each option you wish to install.

Important: Do not install C-Toolkit, Batch software or the Batch Keyboard software as the *last* option. If you do, ControlView will produce this error message:

Couldn't execute 'A:DDC.EXE'

If you see this message, re-install any of the options other than C-Toolkit, Batch or Batch Keyboard as the last option. This will correct the fault.

Example: Installing ControlView 2.11 Core and Options

To install ControlView on the C drive, insert Disk 1 of the ControlView 2.11 disk-set into drive A, and type:

A: *press Enter*

INSTALL C *press Enter*

Follow the instructions on the screen.

-
5. Run the conversion program to convert the database information. Switch to the ControlView hard disk drive, then to the \ACCESS\UTIL directory, and then type the DB10EXP command, naming the database base directory (most likely \ACCESS\DB):

DB10EXP <basedir>

Follow the instructions on the screen.

Example: Converting Databases

To convert databases after installing ControlView 2.11 on drive C, type:

C: *press Enter*

CD \ACCESS\UTIL *press Enter*

DB10EXP \ACCESS\DB *press Enter*

Follow the instructions on the screen.

Important: You must convert ControlView 1.0 databases into ControlView 2.0/2.11 format with the DB10EXP utility. ControlView 2.0/2.11 can not work with a ControlView 1.0 database.

6. If you renamed your custom STARTUP and TOPLEVEL macros in step 1, change their names back to STARTUP and TOPLEVEL so that ControlView will recognize and use them. If you want your system to work with the mouse, be sure the STARTUP macro includes the line

key mouse
7. Move your system configuration file. ControlView 2.11 expects the system configuration file (CFG.DAT) to be in the \ACCESS\CFG directory, rather than the \ACCESS\DAT directory of ControlView 1.0.

Example: Copying the System Configuration File

Type:

COPY \ACCESS\DAT\CFG.DAT \ACCESS\CFG\CFG.DAT press Enter

8. Move your security files. ControlView 2.11 expects the security files (ACCOUNTS.CFG and COMMANDS.CFG) to be in the \ACCESS\CFG directory, rather than the \ACCESS\DAT directory of ControlView 1.0.

Example: Copying the Security Files

Type:

COPY \ACCESS\DAT\ACCOUNTS.CFG \ACCESS\CFG\ACCOUNTS.CFG press Enter

COPY \ACCESS\DAT\COMMANDS.CFG \ACCESS\CFG\COMMANDS.CFG press Enter

9. You may wish to move your 1.0 Event Detector and Derived Tag data files. In ControlView 1.0, these files were stored in \ACCESS\DAT by default; in ControlView 2.11, they should be in \ACCESS\EV and \ACCESS\DT respectively, by default. To move the files:
 - a. Start ControlView and choose *Edit Events* under Configure in the Setup Menu.
 - b. Choose *Path* from the Event Editor menu, and type:
\ACCESS\EV
 - c. Press the + key to accept the change. You are returned to the Event Editor window.
 - d. Press Esc to exit the Event Editor.

- e. Choose *Edit Derived Tags* under Configure in the Setup Menu.
- f. Choose *Path* from the Derived Tags menu, and type:
 \ACCESS\DT
- g. Click on *Accept* or press + to accept the change. You are returned to the Derived Tags window.
- h. Press **Esc** to exit Derived Tags.
- i. Choose *Quit to DOS* under Exit. You return to DOS.
- j. Use the DOS COPY command to move the files.

Example: Copying Event Detector and Derived Tag Files
Type:

```
COPY \ACCESS\DAT\*.EVD \ACCESS\EV press Enter  
COPY \ACCESS\DAT\*.DTG \ACCESS\DT press Enter
```

10. If you use C-Toolkit custom applications, re-compile and re-link them using the Release 2.02 C-Toolkit.
11. Define the foreground scan rates. ControlView 2.11 has separate foreground and background scan rates for each scan class. ControlView 1.0 had separate background scan rates, but all classes shared the same foreground rate.

Start ControlView. Choose *Configure Scan Classes* under Configure in the Setup menu to open the Scan Class Configuration window, and define the foreground scan rates.
12. If you're using a KT card, you now have to define a base address for the card. The address you choose must match the Address Switch setting on your card. To set the address, choose *Configure KT* from the Configure menu.

Upgrading from ControlView 2.0 to 2.11

Follow these steps to upgrade to ControlView 2.11:

1. If you use a custom STARTUP macro or TOPLEVEL macro temporarily rename the STARTUP and TOPLEVEL files so that they will not be over-written when ControlView 2.11 is installed.
2. Remove release 2.0 Core and options using the UNINSTAL command found on the original 2.0 disks. The UNINSTAL command removes the 2.0 software but does not remove any of the data files you have already created.

You will need disk 1 of the Core disk-set and disk 1 of each option. To remove the software:

- a. Insert disk 1 of the ControlView 2.0 Core disk-set into a drive and log onto that drive.
- b. Type the UNINSTAL command, naming the disk drive containing ControlView:

UNINSTAL <location>

- c. Follow the instructions on the screen.

Example: Removing ControlView 2.0 Core and Options

To remove ControlView 2.0 from the C drive, insert disk 1 of the 2.0 Core disk-set into drive A, and type:

A: *press Enter*

UNINSTAL C *press Enter*

Follow the instructions on the screen. When the Core software has been removed, you will be asked if you want to uninstall an option. Choose *Yes*, and repeat this process for each option.

Important: When the 2.0 UNINSTAL procedure has finished removing the software and returns to DOS, it writes messages to the screen. These messages can be safely ignored.

3. Insert Disk 1 of the ControlView Core 2.11 disk-set into the disk drive and log onto that drive. Type the INSTALL command, naming the drive where ControlView 2.11 is to be installed:

INSTALL <location>

Follow the instructions on the screen. When the Core software has been installed, you will be asked if you want to install an option. If so, choose *Yes*, otherwise choose *No*. The process will repeat for each option you wish to install.

Example: Installing ControlView 2.11 Core and Options

To install ControlView on the C drive, insert Disk 1 of the ControlView 2.11 disk-set into drive A, and type:

A: *press Enter*

INSTALL C *press Enter*

Follow the instructions on the screen.

4. If you're using a KT card, you now have to define a base address for the card. To set the address, choose *Configure KT* from the Configure menu. Press **Enter** on the *Base Address* field and a list of addresses pops up for you to choose from. The address you choose must match the Address Switch setting on your card.

ControlView Core 2.11

The ControlView Core software for release 2.11 contains a number of improvements. The principal new features are mouse support, touch screen support and the ability to print documentation on your system configuration.

The system documentation feature is described in the *System Documentor User's Manual*. The rest of the 2.11 Core features are described here.

Installing and Using a Mouse

ControlView development windows now feature scroll bars and a Window Menu button in the top left corner. As each ControlView manual requires reprinting, the graphics will be updated to show the Window Menu button and scroll bars.

Types of Mouse Supported

You can use one of the following types of mouse:

- Mouse Systems™ or compatible serial mouse
- Microsoft mouse (serial version only)
- PS/2 mouse

Setting Up the Mouse

First connect your mouse according to the manufacturer's instructions. ControlView does not use the mouse manufacturer's mouse driver software. Follow these three steps to configure your mouse for ControlView. The third step is optional:

1. Define the mouse in the Device Configuration window.
2. Set the mouse's operating characteristics (speed of response, color, etc.) in the Mouse Configuration window.
3. If you wish, you can also assign commands or simulated keystrokes to mouse buttons, using Key Definitions.

Step 1. Define the Mouse as a ControlView Device

In the Setup Menu, choose *Configure Devices* under *Configure*.

To define a serial mouse, fill in the columns as shown in Figure 1. Choose the serial port you are using—IBMCOM1 or IBMCOM2 on a standard AT-type computer.

To define a PS/2 mouse, choose YES in the *Use PS/2 Auxiliary Mouse Port?* field.

Figure 1
Defining a Mouse in the Device Configuration Window

The screenshot shows the 'Device Configuration' window with the 'Printer Configuration' tab selected. The 'Serial Port' table is configured for a serial mouse. The 'Printer Port' table is empty. The 'Use PS/2 Auxiliary Mouse Port?' checkbox is set to 'No'.

Serial Port	Device	Baud Rate	Data Bits	Stop Bits	Parity
IBMCOM1	MOUSE	1200	8	1	NONE

Printer Port	Device
LPT1	
LPT2	
NetLPT1	
NetLPT2	
NetLPT3	

Use PS/2 Auxiliary Mouse Port?

Accept <+> Cancel <Esc>

These settings are for a serial mouse

Set this to Yes to use a PS/2 mouse

42515

Important: Do not define both types of mouse on one computer.

Save the configuration with the *Accept* button (or + key).

Step 2. Enable the Mouse and Set its Attributes

In the Setup menu, open *Configure* and choose *Mouse Configuration*. The Mouse Configuration window opens.

Figure 2
Mouse Configuration Window

Mouse Configuration

Mouse Enabled:

Pointer Color:

Left-Handed Mouse:

Mouse Resolution:

Accelerated Movement:

Double Click Speed:

42512

You can check various settings with the *Test* button; they become active in ControlView when you choose *Accept* in the Mouse Configuration window. The fields are:

- **Mouse Enabled**
Choose *Yes* to turn on the mouse.
- **Pointer Color**
Choose any of the colors from the list that pops up.
- **Left-Handed Mouse**
The main mouse button can be either the left button (for right-handed users) or the right button (for left-handed users). Choose *Yes* for left-handers, *No* for right-handers.
- **Mouse Resolution**
This defines the sensitivity of the mouse. The Low end of the scale (75 dpi) matches the resolution of the Mouse Systems mouse; the High end (400 dpi) matches the Microsoft mouse.
- **Accelerated Movement**
This defines how far the pointer travels when you move the mouse quickly.
- **Double-Click Speed**
This sets how quickly the main mouse button must be clicked for ControlView to register a “double-click”.

If the mouse is not enabled, you must first choose *Yes* in the *Mouse Enabled* field, then press one of the arrow keys to highlight the *Test* button. Press **Enter** to enable the mouse. The mouse pointer will appear. Now set the rest of the attributes—testing them as you go.

Step 3. Define the Mouse Buttons

The main mouse button is defined in the Mouse Configuration Window, shown in figure 2. For a right-handed person the main mouse button is the button on the left. The other two buttons can be defined as two keyboard keys, and assigned any ControlView command or macro.

A sample mouse key definition file is provided. It is loaded automatically if you use the default STARTUP macro.

With the sample mouse button definitions, the right button closes the current window (the same as pressing **Esc**), and the middle button (of a three-button mouse) opens the Window Menu.

Important: on a two-button mouse, there is no middle button key definition; <m2> key definitions will be ignored.

You can also open the Window Menu by holding down the Shift key while you click the right mouse button.

To set your own key definitions for the mouse buttons, refer to the *ControlView Core User's Manual*, in Chapter 9, *Creating Key Definitions*. In addition to the information in that chapter, you need to know the names to use to refer to the mouse buttons (the *key identifiers*) The mouse key identifiers are:

<m1>	the main mouse button (usually the left button)
<m2>	the middle mouse button of a three-button mouse
<m3>	the “other” mouse button (usually the right button)

The main mouse button (m1) can't be redefined, but it can be combined with the **Shift**, **Alt**, or **Ctrl** key, as in:

<s-m1>	shift key and main mouse button
<a-m2>	Alt key and middle mouse button
<c-m3>	Ctrl key and the other mouse button

Example: Mouse Button Key Identifiers

The following lines could be included in a key definition file, to define the mouse buttons. With these definitions, clicking the “mouse right” button is the same as pressing **Esc** or the Cancel button (the current window closes), and clicking the middle button is the same as pressing the **+** key in the numeric keypad, or the Accept button (configuration information is saved).

```
<m3>    s    <esc>
<m2>    s    <save>
```

Important: Any mouse button assignments are dependent on the right-handed/left-handed mouse setting in the Mouse Configuration window. **<m1>** refers to the index finger button, and **<m3>** refers to the third finger button.

Using the Mouse

Several terms refer to mouse-related objects and movements:

- **Pointer**

The on-screen position indicator. The pointer is normally arrow-shaped, but can take other shapes.

When the computer is too busy to accept keyboard input, the pointer becomes hourglass-shaped.

When the pointer moves over a text field, the pointer takes on a text-entry cursor shape.

When a window is being moved, the cursor becomes a window-movement indicator.

- **Scroll bar**

A vertical or horizontal bar that you use to scroll the window display. The scroll bar contains a slider, a rectangular button. The slider indicates the amount of displayed data and your position in it—if the slider is at the top of the scroll bar, you are looking at the beginning of the information. If the slider is small, a relatively small amount of the total information is visible.



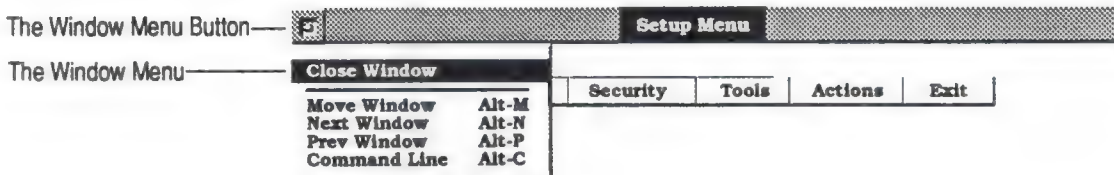
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- **Click**
To press and release the main mouse button once. Click *on* something by moving the pointer over it and clicking. Clicking on something is the same as pressing **Enter** when the item is highlighted.
- **Double-Click**
To press and release the main mouse button twice rapidly. Certain objects provide shortcuts when you double-click on them. One example is the Window Menu button at the top left of a window: click once and the Window menu opens; double-click and the window closes, just as if you had entered an ABORT command. Another example is the Alarm Summary window in the Alarming option: click twice on the name of a tag in alarm, and that tag's alarm IDENTIFY command runs. The double-click speed is adjustable.
- **Drag**
To hold down the mouse button as you move the mouse. To move a scroll bar slider, place the pointer on it and drag.

The Window Menu and Window Menu Button

Click on the gray button in the top left corner of any ControlView window. The Window Menu opens:

Figure 3
The Window Menu, over the Setup Menu



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The Window Menu contains the following items:

- **Close Window**
Closes the window (the same as entering an ABORT command).

- **Move Window**
Enters Window Move mode. In Move Window Mode, the pointer shape changes and you can drag the window to another location on the screen, or click anywhere on the screen to move the window there. Note that there are other ways to move a window: with the keyboard and dragging the window's title bar.
- **Next Window**
Selects the next window on the screen.
- **Previous Window**
Selects the last window which was viewed.
- **Command Line**
Opens the Command Line, where you can type in ControlView commands or macros.

There is a larger Window Menu, which appears when the text cursor is over a data-entry field, where cut-and-paste functions are useful. These extra menu choices allow you to cut or copy text and paste it elsewhere on the window, or onto a similar window.

Figure 4
The Window Menu, over the Scan Class Configuration Window

Scan Class Configuration			
Close Window		Background Period (sec)	Device Class
Move Window	Alt-M	30	ControlView
Next Window	Alt-N	60	ControlView
Prev Window	Alt-P	5	Allen-Bradley
Command Line	Alt-C	60	Allen-Bradley
		5	Allen-Bradley
		60	Allen-Bradley
Cut Text	Alt-K	5	Modbus
Copy Text	Alt-D	60	Modbus
Paste Text	Alt-I		
Mark Text	Alt-X		

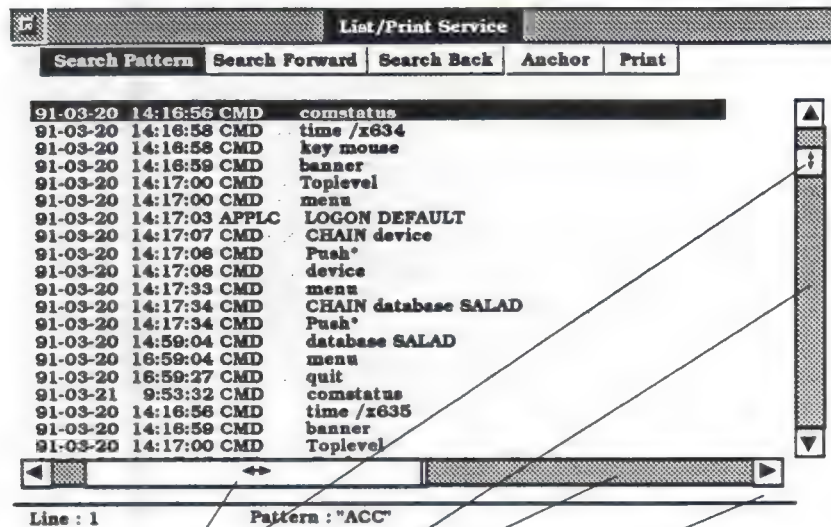
Accept <+> Cancel <Esc>

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Scroll Bars

Whenever the information in a window, value list, or menu exceeds the amount that can be shown in the window, scroll bars appear. There are vertical and horizontal scroll bars.

Figure 5
Scroll Bars on the List/Print Service Window



Drag the slider to scroll the display.
The slider size shows how far you can scroll.

Click in the gray area to move one screen at a time.

Click on the end buttons to scroll a small amount.

To view the off-screen information, drag the slider. As shown in Figure 5, the size of the slider in the scroll bar changes. When the slider is larger, relatively more of the total information is displayed.

Installing and Using a Touch Screen

A touch screen can now be used as an alternate controller. Due to the reduced precision of touch screen control, it is not recommended that you use a touch screen for the kind of detailed movements that are common in the development stage. Rather, use the touch screen as part of an operator system.

The touch screen controls cursor movement in a way that is very similar to the mouse. With a touch screen, you can select menu items and press on-screen buttons.

For a complete description of the new window features of ControlView 2.11, refer to the previous section on using the mouse. It describes the Window Menu Button and the scroll bars, which can be used under touch screen control as well as mouse control.

Touch Screen Supported

ControlView 2.11 supports the Microtouch touch screen, model MTS-1347, from:

Microtouch Systems Inc.
10 State St.
Woburn, Massachusetts 01801

Setting Up the Touch Screen

1. Set the DIP switches within the touch screen (refer to the manufacturer's instructions). The factory-set communication parameters are:

Baud Rate	Data Bits	Stop Bits	Parity
4800	7	2	None

2. Attach the touch panel to the video monitor according to the manufacturer's directions
3. Start up ControlView and open *Configure Devices* under *Configure* in the Setup menu.
4. Configure the touch screen's communication parameters as follows:

Serial Port	Device Type	Baud Rate	Data Bits	Stop Bits	Parity
Name the port the touch screen is connected to	TOUCH	4800	7	2	None

5. Open *Configure Touchscreen* under *Configure* in the Setup menu. A window opens in which the touch screen's response is calibrated.
6. Set the "Untouched timeout period". A period of 60 to 100 ms is usually adequate (Larger touch screens, for 19-inch monitors, require longer timeout periods—up to 120 ms).
7. Yellow arrows will appear in the bottom-left and top-right corners of the screen. Touch on the tip of each arrow to calibrate the touch screen to the visual display. Once this is done the touch screen will be aligned for that viewing angle.

Important: If the operator's viewing angle will be different, re-calibrate the screen at the operator's workstation.

The touch screen calibration is stored in the touch screen's non-volatile memory. You do not need to calibrate it every time ControlView starts up.

The TOUCHON command enables the touch screen. If you will be using a touch screen regularly, include TOUCHON in your STARTUP macro. The TOUCHOFF command disables the touch screen.

Printing Text and Graphics with the Hewlett-Packard Paintjet Printer

With release 2.11, ControlView can print text and graphics on the H-P Paintjet printers (see Table 2).

To configure one of the printers (Printer1 through Printer4) as an HP PCL printer, choose *Device Configuration* under *Configure* in the Setup Menu. In the Device Configuration window, choose *Printer Configuration*, and the Printer Configuration window opens. The list of available printers that pops up from the Printer Type field now includes the type HP PCL.

Table 2
Compatible Graphics Printers for ControlView

HP PCL Compatible	JX80 Compatible
Hewlett-Packard Paintjet	Epson LQ-2250
Hewlett-Packard Paintjet XL	Epson LQ-1050
	Epson LQ-2850
	Okidata Microline 393C
	Dataproducs 9044C
	Star Micronix NX1000

Automatic Window Removal to Avoid Video Memory Limitations

You can now set up ControlView to automatically close windows when new windows are opened. This is a useful and practical way to avoid running out of video memory. There are two ways of setting this up:

- the window which has been on-screen the longest can be removed when a new window is created
- certain types of windows can be removed before other types; for example, you can ensure that your Mouse GRAFIX displays are only removed after tag status displays

To set the way in which windows are automatically removed, choose *Set Up Window Removal* under *Tools* in the Setup menu. The Window Removal Configuration window opens.

Figure 6
Window Removal Configuration

Window Removal Configuration

Always auto remove oldest window: ☐ No

Otherwise, select the order for auto-removal of runtime windows only. If no windows can be removed automatically, a window selection list will be displayed.

Remove first: Trend Displays
Tag Status Windows
Alarm Summary Windows

Remove last: Mouse GRAFIX Displays

Accept <+> Cancel<Esc>

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The configuration options are:

- Always Auto-Remove Oldest Window

This is the “simple” setting, which removes the window or display which has been on screen longest.

- Remove First/Remove Last

If you have chosen No to “always auto-remove oldest window”, you can list the priority in which window types are removed. The first window type you list will be removed first. Windows of the second type will only be removed when none of the first type remain, and so on.

Important: If you choose No to the first field, and do not name any window types for first/last removal, you’ll be prompted to remove a window when you run out of video memory.

Associated with the window removal configuration is a new disk directory, \ACCESS\WAB.

New ControlView Core Commands

UNDEFINE <symbol>

Clears symbols that have been created with DEFINE.

<symbol> is a predefined symbol or the * character. Using * clears all defined symbols.

Examples: UNDEFINE Command

UNDEFINE shut_off_motor

The symbol “shut_off_motor” is cleared.

UNDEFINE *

All symbols in memory are cleared.

MENUBAR

Toggles Menubar Mode. In Menubar mode, the Setup and Action menus (and any menus you define for your own uses) appear as a menu bar at the top of the screen, rather than as a full gray screen. This saves on video memory as well as allowing you to create menus which run over graphic displays.

Important: If you call up the ControlView menu system while Mouse GRAFIX displays are still on screen, you can quickly run out of video memory. Using menubar mode can help avoid this problem.

The MENUBAR command switches to and from menubar mode, although you must leave the menu system in order for the change to take effect.

ControlView starts up in the menu mode that was active when it shut down. To ensure that a ControlView application remains in menubar mode, quit from ControlView when the menubar is in effect (thus saving the setting) and then apply security to the MENUBAR command, so that it can't be used by an operator.

Example: MENUBAR command

To see menubar mode, open the Exit menu and choose *Exit Menu System*. The menu disappears and the command line opens. Type:

menubar

menu

The menu system reappears in menubar mode. To return to full-screen menu mode, repeat the process.

MOUSECONFIG

Opens the Mouse Configuration window (see Figure 2 on page 13), where the mouse's color, resolution, and left- or right-handed attributes are set up.

There are no parameters for this command.

TOUCHON

Enables the touch screen. If you will be using the touch screen consistently, add this command to the STARTUP macro. The touch screen is enabled by default in any system with a touch screen configured.

There are no parameters for this command.

TOUCHOFF

Disables the touch screen.

There are no parameters for this command.

TOUCHCONFIG [*positions*]

Opens the touch screen configuration window, the same as choosing *Configure Touchscreen* in the Configure menu.

[*positions*] are:

- /Xnnn Positions the window nnn pixels from the left edge of the screen, in the range 0 to 640.
- /Ynnn Positions the window nnn pixels from the top of the screen, in the range 0 to 310.

WINDOWCONFIG [*positions*]

Opens the Window Removal Configuration window, the same as choosing *Set Up Window Removal* in the Tools menu. This is where the operating characteristics of the automatic window removal are set up.

[*positions*] are:

- /Xnnn Positions the window nnn pixels from the left edge of the screen, in the range 0 to 640.
- /Ynnn Positions the window nnn pixels from the top of the screen, in the range 0 to 310.

The ControlView Utilities

The ControlView Utilities are now available free of charge from your Allen-Bradley representative. If you need any or all of these utilities, please contact your Allen-Bradley representative.

Note: After installing the utility disks your disk will contain the directory \ACCESS\CVUTIL\DOC. It contains a text file describing each utility, and a combined file called CVUTILS.DOC. They can be viewed or printed with ControlView's LIST/PRINT.

Table 3
Utility Files

Utility Filename	C-Toolkit Source Code File	Runs From	Description
62TOCV.EXE	N	DOS	converts 6200 database into ControlView format
ACAD2CV.EXE	N	DOS	import AutoCAD drawings into ControlView

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ASCII.TSK	N	ControlView	uploads, downloads, scans, stores and displays ASCII text info from A-B PLCs
CAD.TSK	N	ControlView	enables CTRL-ALT-DEL keys
CAL.TSK	N	ControlView	calculator
CAPTURE.TSK	N	ControlView	captures screen image in DOS file
CHDIR.TSK	CHDIR.C	ControlView	changes DOS directory from ControlView
CVBACKUP.EXE	N	DOS	backs up a configured ControlView environment from the developer's computer to the end user's computer
CVCREST.BAT	N	DOS	restores a backed up ControlView environment from floppy disk to hard disk
DBCON.EXE	N	DOS	converts Advisor PC databases for use with ControlView
DELFILE.TSK	DELFILE.C	ControlView	deletes DOS file from ControlView
EDIT.TSK	N	ControlView	text editor
EQUATE.TSK	EQUATE.C	ControlView	reads the value of one tag and writes the value to a second tag
KEYCAP.TSK	N	ControlView	captures keystrokes for later playback using KEYPLAY
KEYOUT.TSK	KEYOUT.C	ControlView	outputs keystrokes from Mouse GRAFIX, Event Detector and other options
KEYOUTP.TSK	KEYOUTP.C	ControlView	as KEYOUT but includes programmable pause
KEYPLAY.TSK	N	ControlView	plays back keystrokes recorded by KEYCAP
KEYSEC.TSK	N	ControlView	checks security on keystrokes
MGCON.EXE	N	DOS	converts Advisor PC Mouse GRAFIX files to ControlView Mouse GRAFIX compatible files
MGX2CODE.EXE	N	DOS	converts static image of Mouse GRAFIX displays to compilable C-Toolkit code
MKDIR.TSK	MKDIR.C	ControlView	makes DOS directory from ControlView
NBTEST.EXE	N	DOS	tests the send/receive capabilities of NetBIOS in DOS
PALETTE.TSK	N	ControlView	Changes ControlView display colors
PLCRW.TSK	PLCRW.C	ControlView	reads/writes directly to PLC addresses
RECIPEDL.TSK	RECIPEDL.C	ControlView	reads a Mouse GRAFIX batch file and downloads the recipe to the PLC without showing the Mouse GRAFIX display
RMDIR.TSK	RMDIR.C	ControlView	removes DOS directory from ControlView
SCANTAGS.TKS	SCANTAGS.C	ControlView	takes a wild card parameter and puts those tags on scan at the foreground or background rate
SECHECK.TSK	SECHECK.C	ControlView	performs additional security check on commands passed as parameters
SETTIME.TSK	SETTIME.C	ControlView	sets time and date clock from ControlView
TOGGLE.TSK	TOGGLE.C	ControlView	toggles value of PLC address
UNS.TSK	N	ControlView	allows ControlView to handle unsolicited block requests
VCOMMAND.TSK	VCOMMAND.C	ControlView	pops up virtual command line for operator input
VIEW.EXE	N	DOS	displays screen captures saved with CAPTURE

Special Notes for Core Release 2.11

There are several additions that have been implemented, as well as some problems that have been discovered:

Multiple Commands on One Line

You can now enter several commands on one line, anywhere that single-line commands are accepted (such as the command line). Separate the commands with a semi-colon (;), such as:

```
load salad; display detail
```

Running the above commands from the Command Line will load the SALAD database and then display the DETAIL graphic.

Saving Several ControlView Configurations

You can now save a ControlView configuration in any directory, not just the default \ACCESS\CFG directory.

Example: Different Configurations in Different Directories

Before setting up the new application, create a base directory, such as D:\PROJ2\CFG, for a new ControlView configuration.

When you start up ControlView, specify this directory as a parameter for the CV command, as in:

CV D:\PROJ2\CFG *press Enter*

ControlView will now store all Configuration data in that location. To set up an entire ControlView project in the \PROJ2 directory, you would also need directories like:

D:\PROJ2\CFG, D:\PROJ2\DB, D:\PROJ2\DL, and so on. To redirect ControlView's tag database path, choose *Edit Database*; in the Database Setup window, redirect the path to D:\PROJ2\DB. Do the same in any options that require their own directories, such as Data Logger.

Changes in the Definable Keys for Key Definitions

There are some new restrictions on the keys that you can define in Key Definition files; for ControlView 1.0 and 2.0 users with existing Key Definition files, there is a way to override the new restrictions and use the old files.

It was previously possible to redefine some potentially dangerous keys, such as **Enter** and **Esc**. To remove this danger, the keys that can be redefined are now:

- the **Function** keys, by themselves or combined with **Shift Ctrl** or **Alt**
- the **Ctrl-Alphabetic** key combinations (not the alphabetic keys by themselves)
- the **Alt-Numeric** key combinations (not the numeric keys themselves - and not the keys in the numeric keypad)
- the mouse buttons

You can no longer redefine the numeric keypad keys, nor the special keys (**Ins**, **Del**, backspace, etc.), nor the **Alt-Alphabetic** key combinations.

To load a key definition file containing key definitions which are now disallowed, use the **/O** parameter, described next.

New Parameter for the KEY Command

The **/O** parameter overrides the key definition safety-check, and allows old key definition files to run without modification. To load a file named **OLDKEYS**, type:

KEY /O OLDKEYS *press Enter*

Important: The **/O** parameter permits some important keys to be redefined, such as **Enter**, **Esc** and **+**, and should be used with caution.

Notes on the LOAD command

1. Using the **LOAD** command without a database name now brings up a list of databases to choose from.
2. When using the **LOAD** in a macro, from a defined key, or in any use except by itself from the command line, you must provide a database name. In ControlView's multi-processing operating system, commands are executed virtually simultaneously. This can cause unexpected behavior if a command assumes that a previous command has executed properly. In the case of the following commands:

```
load salad;status *.*
```

The **salad** database loads and the **Status** display appears, showing the tags in the **Salad** database. But if the database name is omitted, as follows:

```
load;status *.*
```


A list of databases to choose from will pop up, but it will be almost instantaneously covered by the Status Window. The Status shown is the Status of the tags in memory *before* the LOAD command, not after. If no database is in memory before the line is run, the status command will fail.

Unless the LOAD command is to be used by itself, always provide the database name.

3. A new parameter, /i, initializes all tags in the CVD to the initial values specified in the database editor, when the database loads. The default is that local tags only are updated at the moment of loading. Note that it will take longer to load a database and initialize all tags. The command:

```
load /i salad
```

loads the SALAD database and initializes all tags.

Notes on the POSITION command

Do not use the POSITION command with Mouse GRAFIX displays. Instead, use the mouse to select objects in the display. Use of the POSITION command interferes with the operation of the CHAIN function, so that closing the display will not bring back the previous window.

New Parameter for the DISPLAY command

The data in data entry fields can now be updated when a Mouse GRAFIX display loads. The /U parameter, used before the filename, updates all CVD/programmable controller data. (It is equivalent to pressing the PgUp key when a display is on-screen.) The command:

```
display /u salad /q1
```

loads the display named SALAD with updated CVD data, and places the display in the top right quarter of the screen.

New Features of List/Print

The default color of selected blocks of text has been changed for added clarity. Now, the highlighted block is red text on a black background.

A mouse feature has also been added: Double-clicking on a line starts selecting, with that line as the anchor; dragging the slider in the scroll bar extends the selection; double-clicking again stops selecting.

Novell Versions and Print Capture

ControlView supports two kinds of networks, file server only, and peer-to-peer. Peer-to-peer networks require the installation of the optional ControlView Networking software. Additional software requirements are as stated in Table 4.

Table 4
Networking Software Requirements

If you want	You need	Version
file server access only	Novell System Fault Tolerant (SFT) or Advanced NetWare	V2.12 or V2.15 rev C
peer-to-peer	ControlView Networking option	2.01 or later
	Novell System Fault Tolerant (SFT) or Advanced NetWare	V2.15 rev C

ControlView does not support file servers with Novell NetWare 386 or LAN cards using Novell Version 3.01 Drivers. The version number is displayed when you log into a file server.

ControlView's CAPTURE command works only with the supported versions of Novell software.

Novell NetWare and File Servers

Installation of ControlView 2.11 will write a new version (v1.1.6) of the RTXHELL.EXE file into your \ACCESSSYS directory. If you have not moved RTXHELL.EXE out of that directory, the new file will automatically overwrite the old file. If you have moved your existing RTXHELL.EXE file into another directory for some reason, be sure that you replace the old file with the new file. Running RTXHELL should produce a banner identifying the file as Release 1.1.6.

In addition, installation of ControlView 2.11 will write a new file called RTXNOV into your \ACCESSSYS directory. This file should be loaded *after* the IPX file and *after* the NET3.COM or NET4.COM file when starting ControlView on a Novell network. These files can be included in a batch file provided they are executed in the order stated.

Note: RTXNOV only loads with Version 2.15 rev C of the NET file.

Modify step 3 of the procedures shown in the *ControlView Core User's Manual*, Appendix D, *Running on a Network*, page D-5, as follows:

3. Load the Novell drivers by changing to the directory they are in and typing

```
IPX press Enter
NETx press Enter
\ACCESS\SYS\RTXNOV  press Enter
```

Important: With ControlView 2.11, network adaptors can use IRQ2. However, with some DOS drivers, problems may result from using IRQ2, so use another IRQ level if possible.

Scanning

The way scanning works on startup has been improved. In releases 1.0 and 2.0, tags assigned to scan classes did not have their values updated at the moment they were put on scan. Instead, the values were updated at the *end* of each scan period.

In Release 2.11, tags are given current values at the moment they are put on scan.

Long Integers and the SET/RAMP Commands

ControlView supports the following range for long integers when writing to a PLC:

-2147483583 to 2147483583

This range is slightly smaller than the range allowed by the ANSI standard and the PLC-5/250 software (-2147483647 to 2147483647). If you exceed ControlView's limits when writing values to the Long (L) section or analog (long) members, ACC and PRE of the Timer section, the error number "seterrmsg (4)" is displayed, indicating that the value is out of range.

ControlView can read all values from a PLC that fall within the ANSI / PLC-5/250 limits.

Intertask Message Failure

The error "cinerr (50)" may occur when the same command is executed twice in quick succession—typically in a macro. If you see this error, execute the commands or macro again. Also, record the command sequence that generated the error and report this information to your A-B representative.

Communication Errors

The communication status window may display communication errors (i.e. turn red) during times of heavy traffic on the communication network. To avoid this problem you can slow the baud rate from 19200 to 9600 or use the KT card (instead of KF2 or IDH) for PLC communications.

Using Incorrect IBMCOM Ports

When defining the computer's ports in the Device Configuration Window, be sure not to assign a highway to a port which does not exist. Specifically, if you have a Serial/Parallel Expander (6171-MX5 or MX8) attached to your computer, do not try to assign anything to the non-existent IBM ports IBMCOM3 through IBMCOM8. Use the correct MX-port designation, MXCOM1 through MXCOM6. The incorrect port assignment may be accepted by ControlView, but it will cause errors when you try to run your system.

ASCII Tags

ControlView 2.11 does not support ASCII tags. The ASCII data type is listed in the database editor for future support of ASCII tags. For now, do not use the ASCII data type in the database editor or in database import files. If ASCII tags are defined, the Current Value Database will contain incorrect values for these tags.

Note: The utility disk includes a utility called ASCII.TSK that reads and writes ASCII tags, but it is not officially supported.

Confirmation of Command Execution

Certain ControlView commands, such as ACTIVITYOFF and ALARMOFF, give no indication that they've been executed but will display an error message if they are not executed properly.

A New Database Export Parameter

The DBEXP command parameter, /D, specifies a field delimiter character. Normally the fields in a report are delimited (separated) by spaces, but with the /D parameter you can separate them with commas, or any character of your choice. For example:

DBEXP dbname /D,

would separate each field with a comma.

DBEXP dbname /D-

would separate each field with a hyphen.

If no character follows the /D, the fields will be separated by spaces.

Important: By default, fields are delimited with spaces, and fields which could logically *contain* spaces are delimited with quotes. If /D is used, quotes will not be placed around these fields—unless the delimiter character selected is the quote, and then quotes will delimit *all* fields.

Errors in the User's Manual

The GoTo Function in the Database Editor

The user's manual does not adequately describe one feature of the database editor: the GoTo function (in the menu at the top of the Database Editor) allows you to go directly to any tag in the database, even if that tag is within a group.

What must be noted is that the GoTo is a temporary jump, and does not change the "current group". Thus, if the current group is group X, you can use GoTo to select a tag in group Y, but when you exit from editing that tag you will return automatically to group X.

To change the current group, use GoTo and select a group name, not an individual tag name.

Incorrect TIME defaults

In the description of the TIME command which starts on page A-30, it is stated that the default format for time display is 24-hour mode. In fact the default mode is based on the DOS COUNTRY setting.

Incorrect dBASE Example

The example on page C-14, provides the following dBASE command:

```
REPORT FROM rpt_file TO FILE file_out
```

The example should read:

```
REPORT FORM rpt_file TO FILE file_out
```

Incorrect LAN/PC Interrupt Request (IRQ) Configurations

Table D.1, page D-2, Appendix D contains an error. The third entry in the table should *not* include IRQ7 as a possible configuration. IRQ7 is used by LPT1. The table should read:

If your ControlView hardware configuration uses:	Use one of these IRQ levels for your Network card and IPX driver:
IBM COM1 IBM LPT1 IBM LPT2	2*, 3, 10, 11, 12**, 15

Similarly, the example shown on page D-4 should read:

If your ControlView software is running on a computer that includes an MB14/A in 512K mode and an EGA card, and you are using COM1:, LPT1:, and LPT2:, configure the LAN/PC Network Interface Module and generate the IPX file using these parameters:

```
IRQ = 3
I/O BASE = 1E0H
Ram Buffer at D000:0
```

Database Import/Export—An Error in the Core Manual

In the tables and examples from page C-7 to C-11 of the ControlView Core User's Manual, some fields are incorrectly noted as requiring quote delimiters. Quote delimiters are required only on those fields which could logically contain spaces. Following is Table C.2 and its related example, corrected from page C-7. The changes are marked in bold type.

Table C.2
Digital Point Formats

Field Name	Field Contents	Maximum Field Size	Delimit With Quotes
D	record type identifier (use this literal string to identify a digital tag)	1	No
name	the complete tag name including any group names	20	No
<i>description</i>	the tag's description	32	Yes
<i>address_type</i>	address type (None, PLC2, PLC3, PLC5, PLC5/250, PLC5-40/60 , Modicon)	10	No
<i>node</i>	address node string	8	Yes
address	tag's address string	31	No
<i>class</i>	the tag's scan class (a letter between A and H or a space)	1	Yes
access	access code (a letter between A and P or an asterisk)	1	No
<i>OFF_label</i>	the off label string	10	Yes
<i>ON_label</i>	the on label string	10	Yes
<i>initial</i>	initial value string (ON_label or OFF_label)	10	Yes
<i>units</i>	units string	6	Yes

Example: Digital Point

This is the format for a digital record as it would appear in a straight ASCII file. This whole string is terminated with a carriage return.

```
D group1.digital1 "Digital tag number one" PLC3 "NODE1" N1:1/1 "A" * "HI"
"LO" "LO" "VOLTS"
```

The same correction should be made to Table C.3 and its related example (the addr, name and access fields); Table C.4 and its example (the base_addr field); Table C.5 and its example (the access field); Table C.6 and its example (the access field).

A-B Drivers 2.11

Supported Links to Data Highways and PLCs

Table 5
Supported Links to Data Highways and PLCs

Network Link:	To:	Through:
Data Highway	PLC-2, PLC-3, PLC-5/250, PLC-5/40, PLC-5/60	6171-IDH, 1771-KC/KD, KE/KF, 1770-KF2 Series A or B
Data Highway II	PLC-2, PLC-3, PLC-5, PLC-5/250, PLC-5/40, PLC-5/60	1779-KFL/KFLR, KP2, KP3, KP5
Data Highway Plus	PLC-5, PLC-5/250, PLC-5/40, PLC-5/60	6171-IDH, 6171-QID, 1770-KF2 Series B, 1784-KT/KT2, 1785-KE
DH-485	SLC 500 family	1770-KF3
direct serial link	PLC-3	1775-KA modem port
direct serial link	PLC-2	1771-KG
direct serial link	PLC-5/250, PLC-5/40, PLC-5/60	RS-232 port

Refer to the appropriate User's Manual for details of how to connect a Data Highway to your computer.

Using the CRC Error-Detection Protocol

A-B Drivers 2.11 supports the CRC error-detection protocol as well as the BCC protocol. Only the DF1 and DHII drivers can take advantage of CRC error checking.

By default ControlView uses BCC; to set CRC error-checking, you have to set an environment variable in DOS before running ControlView. The environment variable is CV_CRC_HW#, where # refers to one of the two possible data highways. To set highway 1 to use CRC checking you would set the environment variable as follows:

```
SET CV_CRC_HW1=ON
```

Set Highway1 back to BCC error checking as follows:

```
SET CV_CRC_HW1=
```

Configuring the A-B Drivers

Highway Configuration

Choose *Configure Devices* from the Configure menu. The Device Configuration Window appears.

Choose *Highway Configuration* from the Device Configuration Window. The Highway Configuration window opens.

The value lists under the *Type* column now include the possible choice DH-485.

Configure Nodes

The value list for the *Type* column of the Node Configuration window now includes PLC-5/40, PLC-5/60 and SLC 500 family controllers as valid node types. The PLC-5/40 and PLC-5/60 are combined into one listing, PLC5-40/60. The SLC 500 type includes the SLC 5/01 and the SLC 5/02, and the SLC 500 (fixed I/O).

Station

To address PLC5-40/60, follow the procedure for the PLC-5. Specify the station number in octal.

To address SLC 500s, use the physical station number of the SLC 500 on the DH-485 network. Valid station numbers are 0-31 decimal.

The Database and Addressing

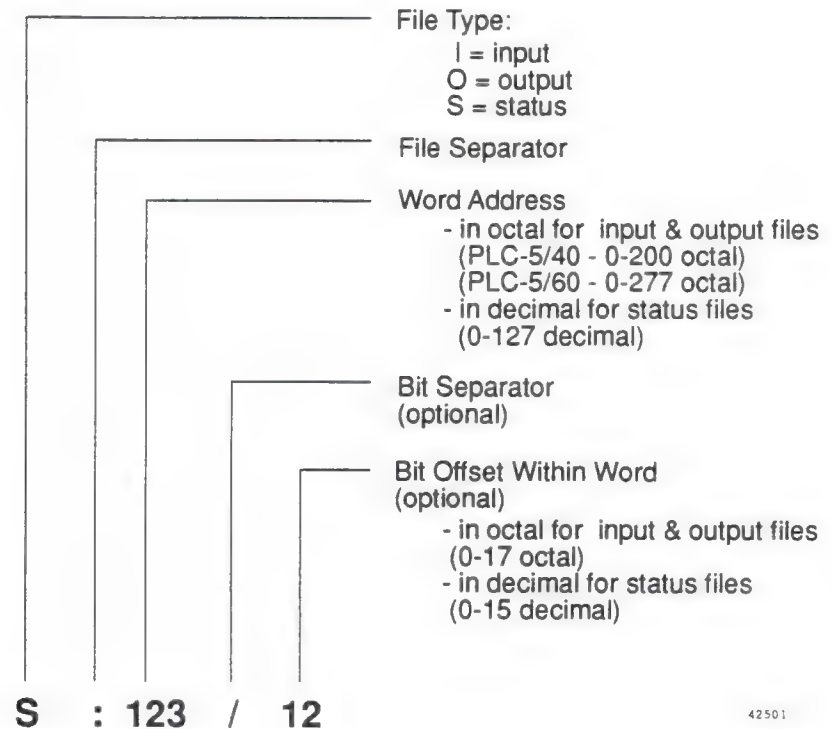
Address Type

PLC5-40/60 and SLC 500 are now valid choices, and are included in the value list for this field.

Address

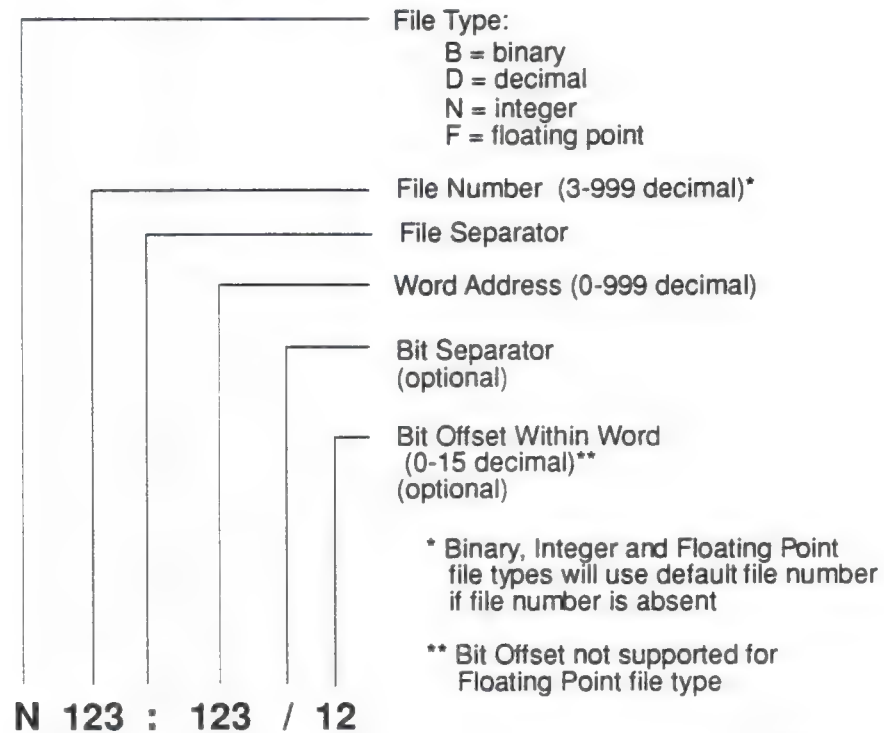
The syntax for addressing PLC5-40/60 and SLC 500 files is shown in Figures 7 to 18. Tables 6 to 13 list related mnemonics.

Figure 7
PLC5-40/60 I/O and Status Files



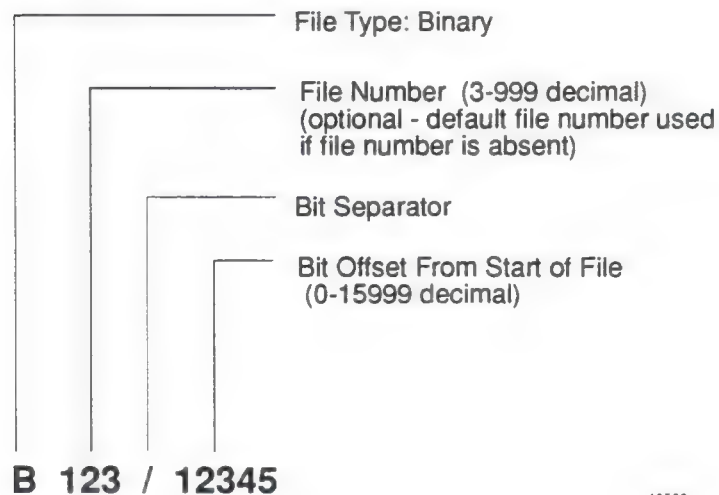
42501

Figure 8
PLC5-40/60 Binary, Integer, BCD and Float Files



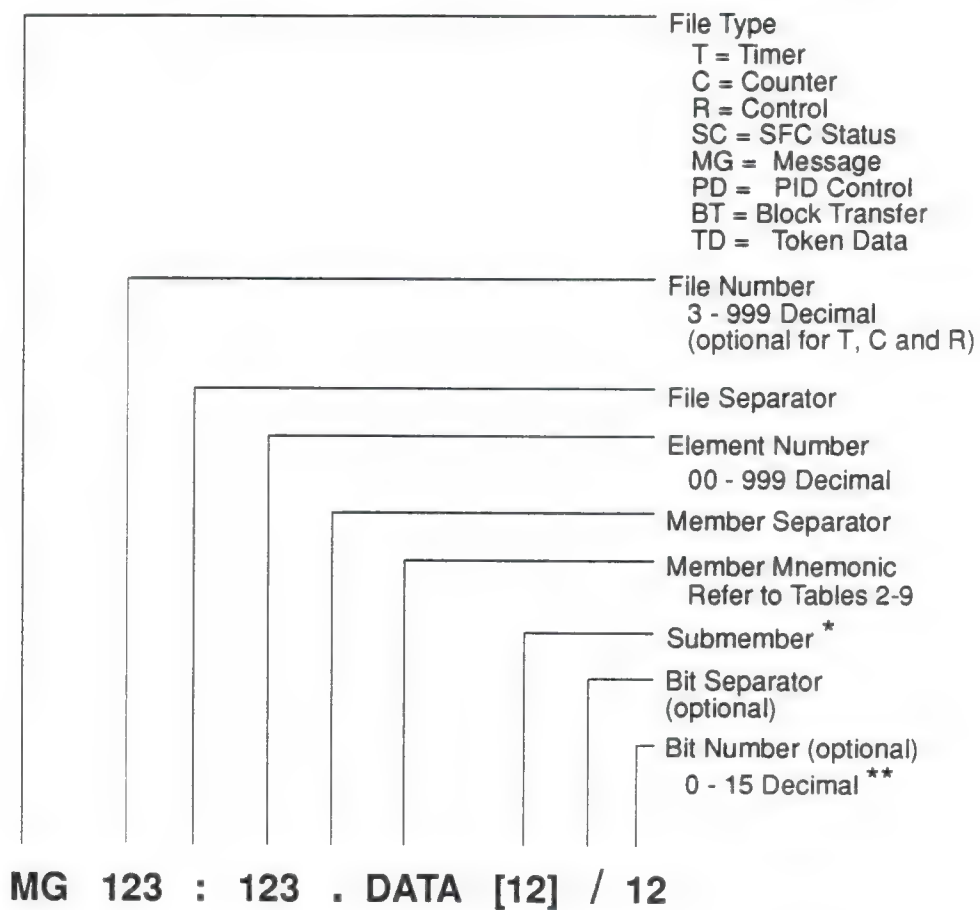
42503

Figure 9
PLC5-40/60 Alternative Binary Format



42502

Figure 10
PLC5-40/60 Timer, Counter, Control, SFC Status, Message, PID, Block Transfer
and Token Data Files

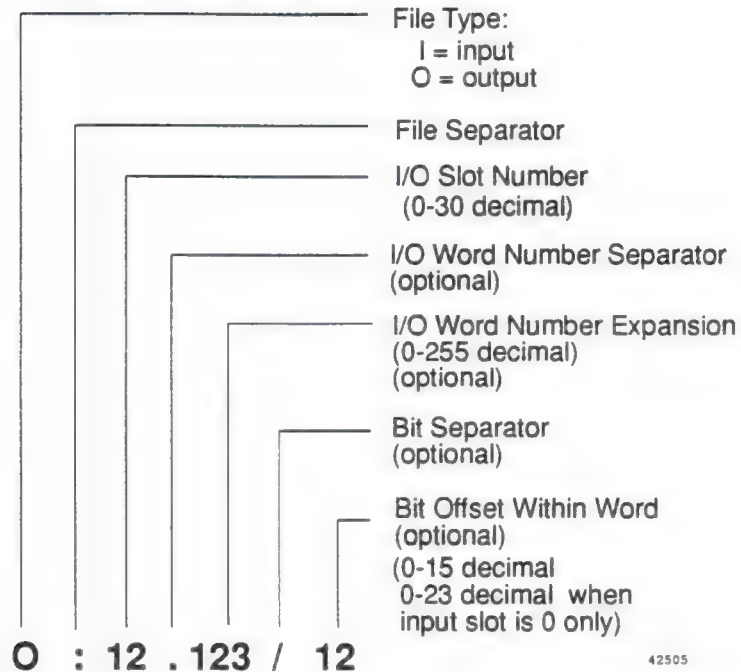


* Only applies to .ADDR and .DATA members of PID structure and .DATA member of MSG structure.

** Bit number only applies to analog word members.

42504

Figure 11
SLC 500 I/O Files



Important: ControlView only reads the I/O configuration of your SLC 500 when the first request for information is made. If the SLC 500's configuration is changed while ControlView is running, ControlView will have to be restarted before the changes are recognized.

Figure 12
SLC 500 Status Files

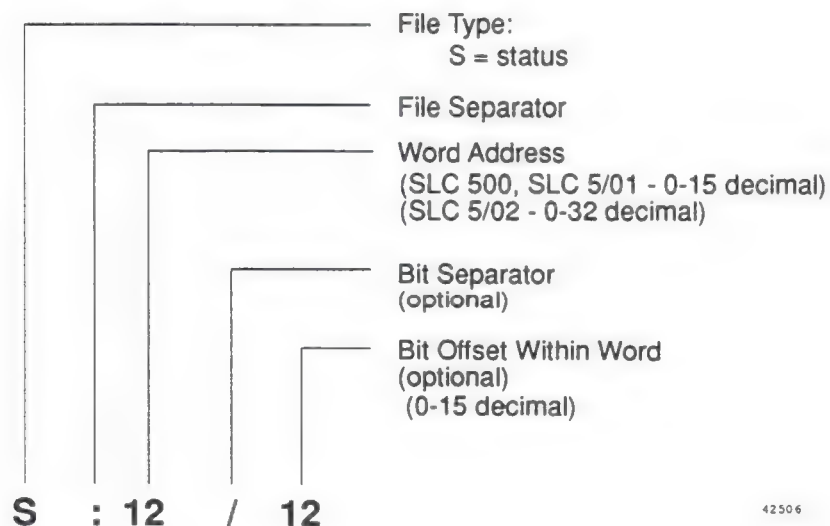


Figure 13
SLC 500 Binary and Integer Files

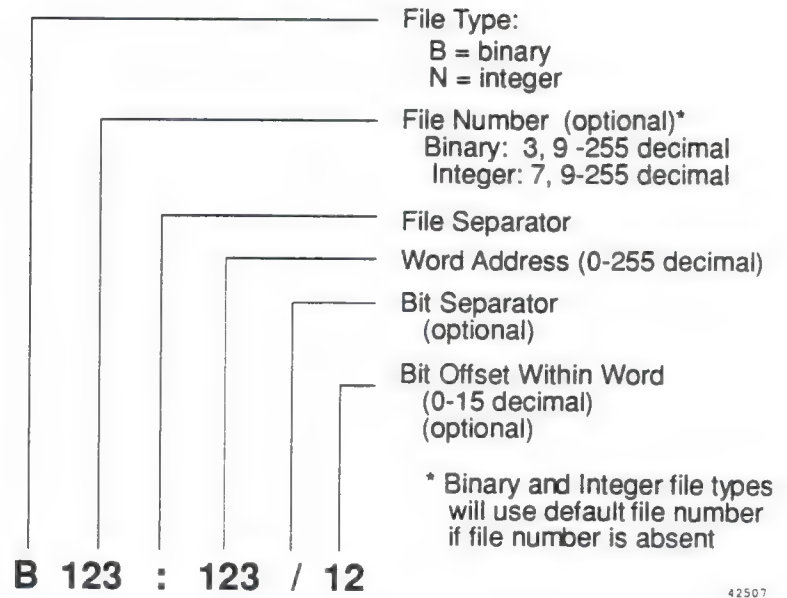


Figure 14
SLC 500 Alternative Binary Format

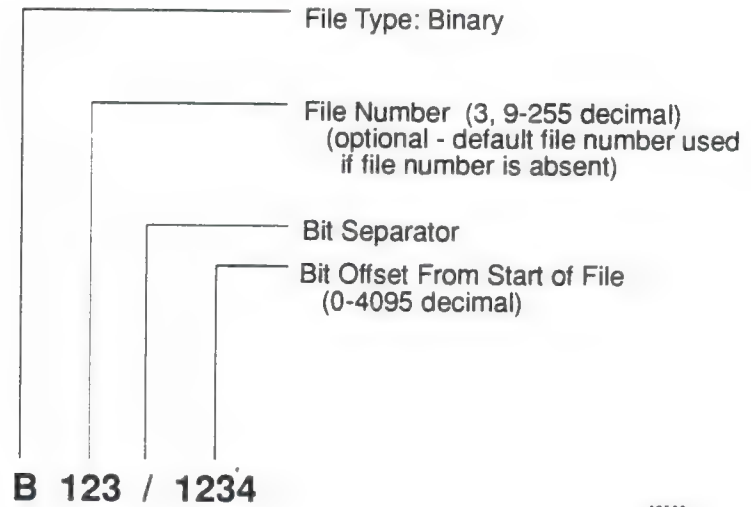


Figure 15
SLC 500 Timer, Counter and Control Files

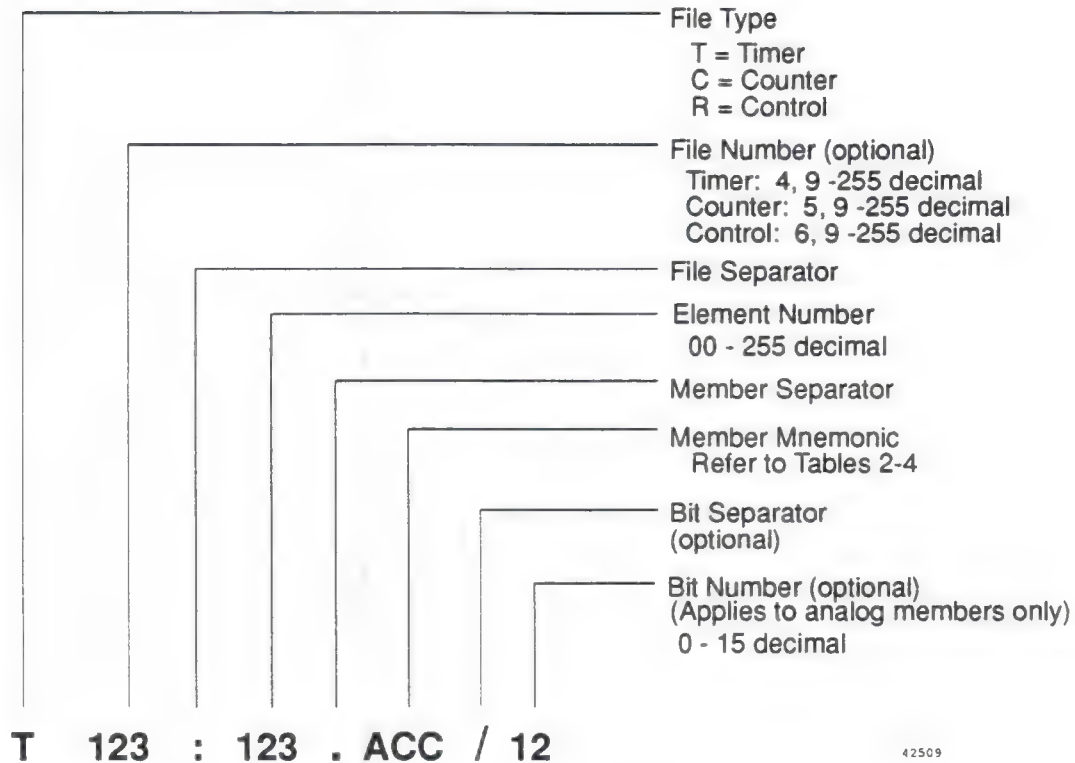


Figure 16
SLC 500 Timer, Counter and Control Files
Alternative Bit Member Addressing Format

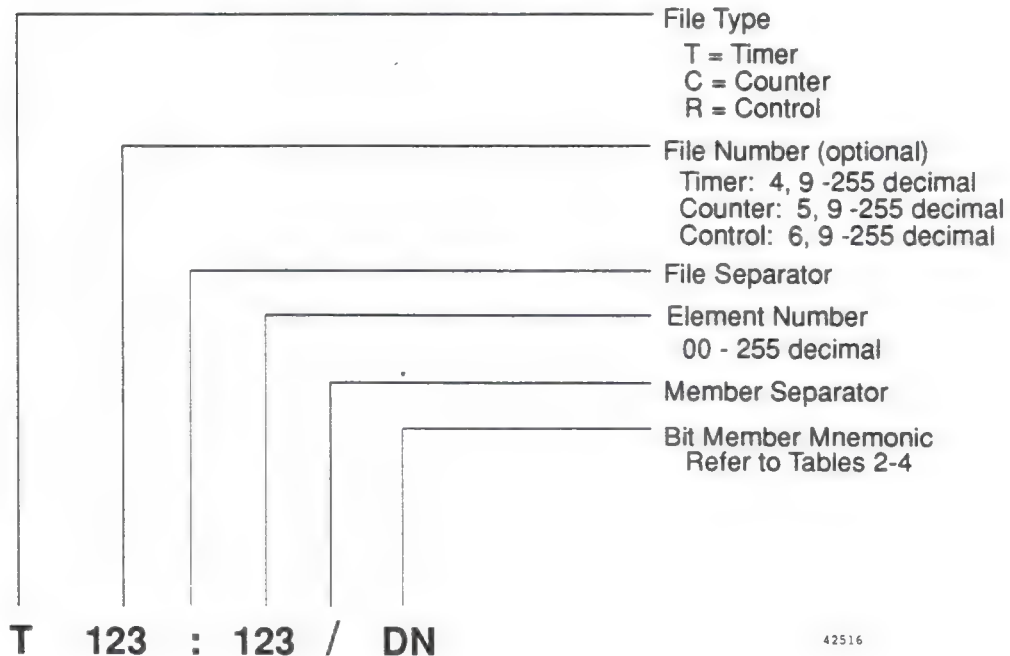


Figure 17
SLC 500 Timer, Counter and Control Files
Alternative Format - Bit Member Addressing By Bit Address

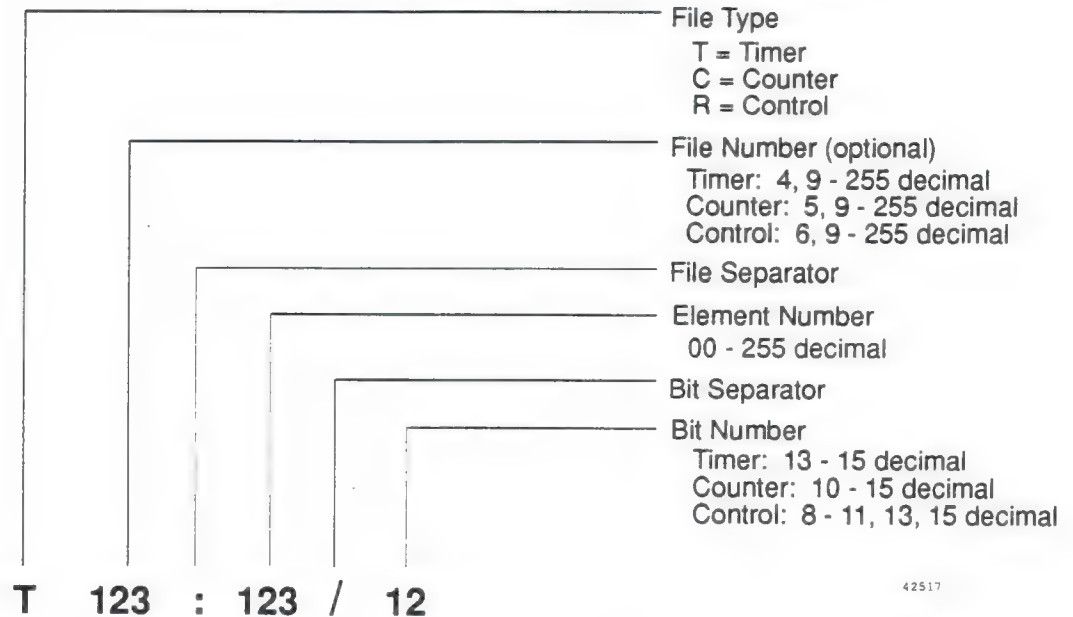
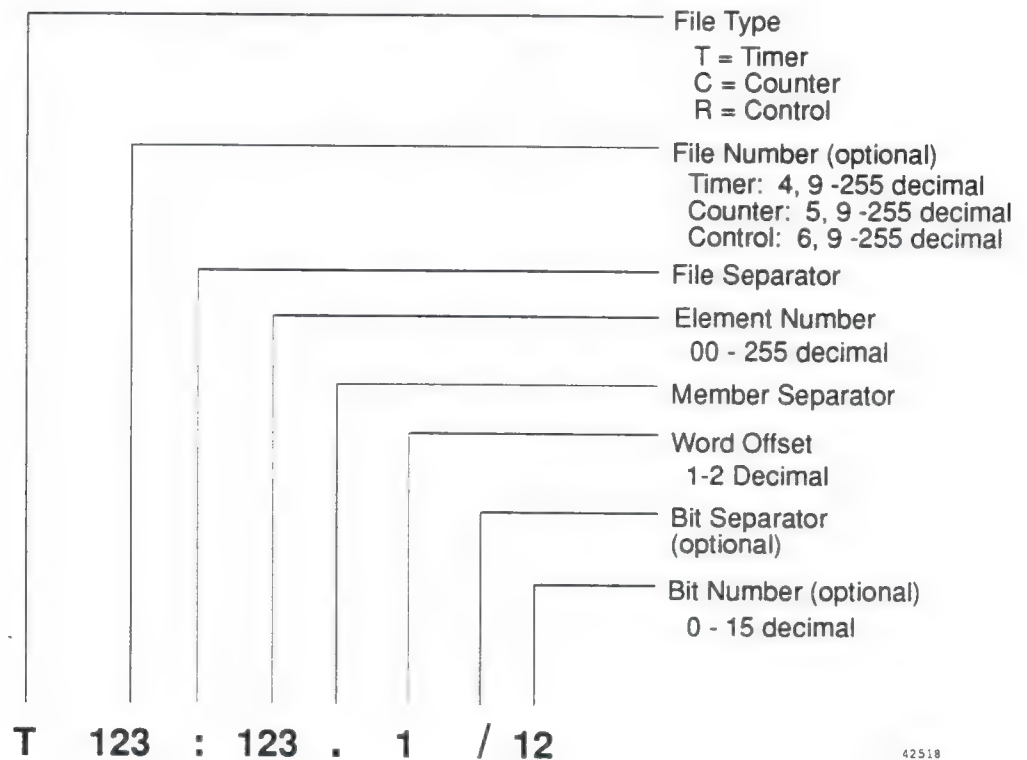


Figure 18
SLC 500 Timer, Counter and Control Files
Alternative Analog Member Addressing Format



Mnemonics

Table 6
Timer Mnemonics

Mnemonic	Instruction	Type
EN	Enable	Digital
TT	Timing	Digital
DN	Done	Digital
PRE	Preset Value	Analog
ACC	Accumulated Value	Analog

Table 7
Counter Mnemonics

Mnemonic	Instruction	Type
CU	Count Up	Digital
CD	Count Down	Digital
DN	Done	Digital
OV	Overflow	Digital
UN	Underflow	Digital
PRE	Preset Value	Analog
ACC	Accumulated Value	Analog

For SLC 500 only

UA	Update Accumulator Value	Analog
----	--------------------------	--------

Table 8
Control Mnemonics

Mnemonic	Instruction	Type
EN	Enable	Digital
DN	Done	Digital
ER	Error	Digital
UL	Unload	Digital
IN	Inhibit	Digital
FD	Found	Digital
LEN	Length	Analog
POS	Position	Analog

The following control mnemonics apply to all PLCs except SLC 500

EM	Empty	Digital
EU	Enable Unloading	Digital

Table 9
PID Mnemonics

Mnemonic	Instruction	Type	Submember range
EN	Enable	Digital	
CT	Cascaded Type	Digital	
CL	Cascaded Loop	Digital	
PVT	PV Tracking	Digital	
DO	Derivative Of	Digital	
SWM	Software A/M Mode	Digital	
CA	Control Action	Digital	
MO	Mode	Digital	
PE	PID Equation	Digital	
INI	PID Initialized	Digital	
SPOR	SP Out of Range	Digital	
OLL	Output Limit Low	Digital	
OLH	Output Limit High	Digital	
EWD	Error Within Deadband	Digital	
DVNA	Deviation High Alarm	Digital	
DVPA	Deviation Low Alarm	Digital	
PVLA	PV Low Alarm	Digital	
PVHA	PV High Alarm	Digital	
SP	Setpoint	Analog	
KP	Proportional Gain	Analog	
KI	Integral Gain	Analog	
KD	Derivative Time	Analog	
BIAS	Output Bias %	Analog	
MAXS	Setpoint Maximum	Analog	
MINS	Setpoint Minimum	Analog	
DB	Deadband	Analog	
SO	Set Output %	Analog	
MAXO	Output Limit High %	Analog	
MINO	Output Limit Low %	Analog	
UPD	Update Time	Analog	
PV	Process Variable	Analog	
ERR	Error	Analog	

Table 9
PID Mnemonics (cont'd)

Mnemonic	Instruction	Type	Submember range
OUT	Output	Analog	
PVH	PV Alarm High	Analog	
PVL	PV Alarm Low	Analog	
DVP	Deviation Alarm +	Analog	
DVN	Deviation Alarm -	Analog	
PVDB	PV Alarm Deadband	Analog	
DVDB	Deviation Alarm Deadband	Analog	
MAXI	Input range Maximum	Analog	
MINI	Input Range Minimum	Analog	
TIE	Tieback %	Analog	
ADDR[]	Address of Master Loop %	Analog	0 — 3
DATA[]	Reserved / Interim Use	Analog	0 — 13

Table 10
Message Mnemonics

Mnemonic	Instruction	Type	Submember range
NR	No Response	Digital	
TO	Time Out	Digital	
EN	Enable	Digital	
ST	Start Transmission	Digital	
DN	Synchronization Done	Digital	
ER	Synchronization Error	Digital	
CO	Continuous	Digital	
EW	Enable Waiting	Digital	
AD	Done	Digital	
AE	Error	Digital	
ERR	Error Code	Analog	
RLEN	Request Length	Analog	
DLEN	Done Length	Analog	
DATA[]	Reserved / Internal Use	Analog	0 — 51

Table 11
Block Transfer Mnemonics

Mnemonic	Instruction	Type
EN	Enable	Digital
ST	Start	Digital
DN	Done	Digital
ER	Error	Digital
CO	Continue	Digital
EW	Enable Waiting	Digital
NR	No Response	Digital
TO	Time Out	Digital
RW	Read Writes	Digital
RLEN	Requested Length	Analog
DLEN	Done Length	Analog
FILE	File Number	Analog
ELEM	Element Number	Analog
RGS	Rack Group Slot	Analog

Table 12
Token Data Mnemonics

Mnemonic	Instruction	Type
HI	High	Analog
LO	Low	Analog

Table 13
SFC Status Mnemonics

Mnemonic	Instruction	Type
SA	Scan Active	Digital
FS	Forced Scan	Digital
LS	Last Scan	Digital
OV	Timer Overflow	Digital
ER	Step Errored	Digital
DN	Done	Digital
PRE	Preset	Analog
TIM	Active Time	Analog

New Material for Appendix B: Cabling Diagrams

Connecting the KF3 to a Computer

Use Belden #8723 (or equivalent) cable to construct a cable to connect the KF3 to a computer. The length must not exceed 50 feet, and the cable shield must be connected to Pin 1 at the KF3 end only.

There are various cabling options depending on whether or not your application makes use of handshake signals, whether or not you are connecting to a 9 pin serial port for an IBM AT, and whether or not your computer uses standard IBM pinouts. The following diagrams are for IBM computers with either 9 or 25 pin ports. If your computer has a different pinout, construct a cable using the appropriate signal names for your computer.

If you are not using the handshake signals, use one of the three wire connections shown in Figures 19 and 20.

Figure 19

Three Wire Connection to IBM Computer (25 pin)

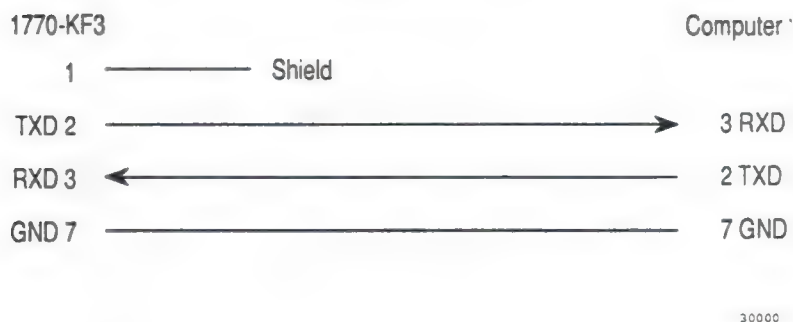
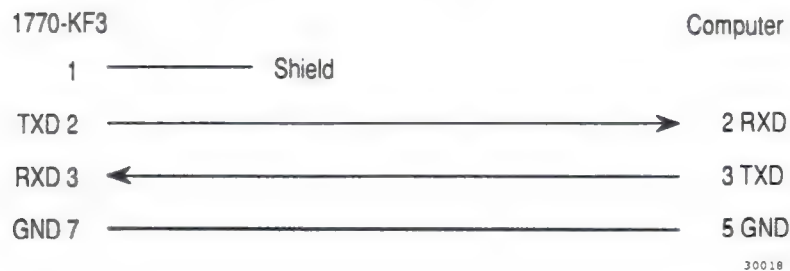


Figure 20

Three Wire Connection to IBM Computer (9 pin)

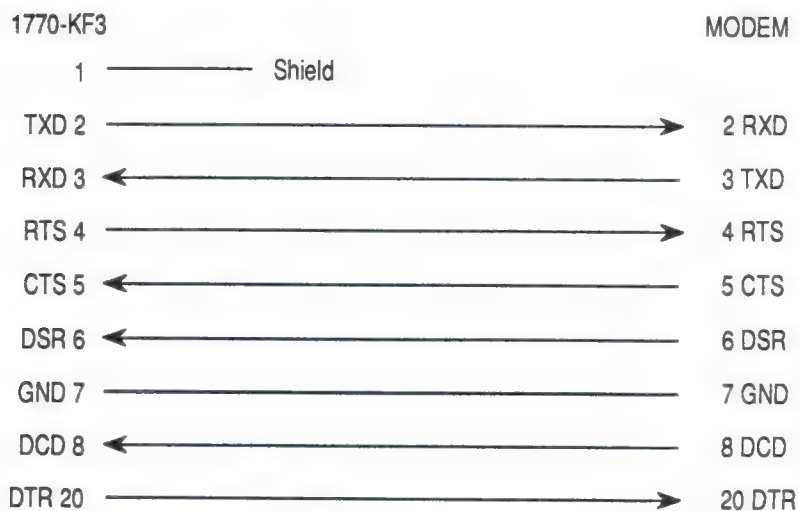


Connecting the KF3 to a Modem

The KF3 is connected to a modem via a direct 25 pin-to-25 pin cable, which you must construct using Belden #8723 (or equivalent) cable. The length of the cable must not exceed 50 feet, and the cable shield must be connected to Pin 1 at the KF3 end only.

Figure 21 shows the connection between a KF3 and a modem.

Figure 21
Connection to a Modem



30003

Errors in the User's Manual

Figure 2-22, PLC-5/250: Block Transfer Data Section: the range given for the File Number and the Element Number (0-9999) is incorrect. The range for both should be 0-254.

The sample address at the bottom of this figure should read

1 BTD 123 : 123 / 12

Mouse GRAFIX 2.11

Notes on 2.11 Mouse Support and Mouse GRAFIX

All ControlView systems can run Mouse GRAFIX displays. If you own the Mouse GRAFIX Editor, you can create and modify Mouse GRAFIX displays. This section describes how the addition of mouse support to ControlView 2.11 affects the running and editing of Mouse GRAFIX.

Limitations

All of your existing Mouse GRAFIX displays can be used without any modifications. New displays that you create using the 2.11 mouse features will not run on previous releases of ControlView.

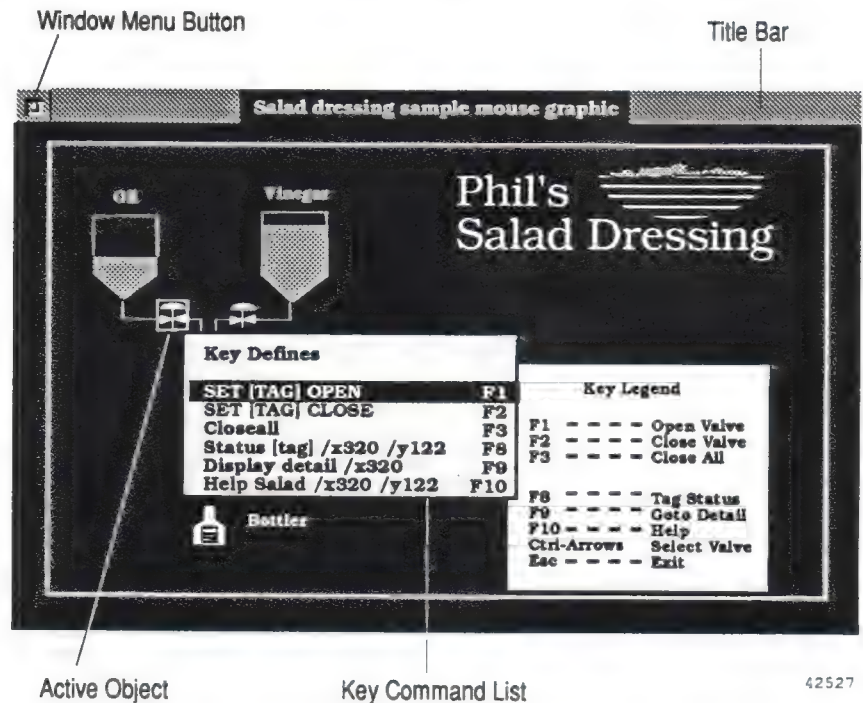
Previous releases of the Mouse GRAFIX Editor cannot coexist with the new mouse support software. The Release 2.11 Mouse GRAFIX Editor must be used with the Release 2.11 ControlView Core.

Features

- Key Command List objects can be selected as the active object by clicking on them
 - once an object is selected as active, clicking on it again displays a Key Command Menu. The menu contains any Key Commands defined for the active object, as well as any Display Key definitions for the active display.
 - items from the Key Command Menu can be selected by clicking on them
 - on any display which does not include data entry fields, the arrow keys can be used to select key command objects:
 - ← selects the nearest object to the left of the active one
 - selects the nearest object to the right of the active one
 - ↑ selects the nearest object above the active one
 - ↓ selects the nearest object below the active object
- Enter** displays the Key Command List for the selected object

When there are data entry fields on the display, use the **Ctrl** key combinations as usual.

Figure 22
Salad Display with Key Command List



- you can use the Window Menu to switch to hidden windows with the mouse—click on the Window Menu button at the left of the title bar. If the title bar is not displayed, use **Alt-N** or **Alt-P** to open any windows that are hidden behind the Mouse GRAFIX display

Mouse GRAFIX Editor Features

- Mouse GRAFIX displays can now have a title bar. The title will be the description defined for that display in the Mouse GRAFIX Info Page dialog box. To display the title bar, choose Info Page under *Setup* in the Mouse GRAFIX editor. Select *Display Title*, then choose Yes or No

Displaying the title bar shifts the display down and hides the bottom 14 pixel lines of the display.

- the mouse can be configured for either right or left handed use. The buttons are named M1, M2 and M3: for right-handers, M1 is the left button and M3 is the right button. For left-handers, M1 (the first finger) is on the right, and M3 is on the left. M2 is the middle button of a three-button mouse

- Keys in the Key Command List can be set up to display a description rather than the actual command string. Add a comment (beginning with an exclamation mark) after the command string, and the comment will be shown in the Key Commands menu
- the Key Commands menu can have any title you choose (not just the default name "Key Defines"). Type the title of your choice in the Key Command List editor, *after* a command, and beginning with a ~ (tilde) character.
- mouse buttons can be redefined as Mouse Command Buttons by assigning a Key Command or Display Key definition to them. Pressing the mouse button executes the defined command

Define mouse command buttons by choosing m1, m2 or m3 from the Key Command or Display Keys value list. m1, the index finger button, is already used by ControlView, so you cannot reconfigure it except as a Key Command. When m1 is configured as a Key Command, the command is immediately executed when an object is selected with the mouse. This feature can be used to create button-like objects.

Special Notes on Mouse GRAFIX Release 2.11

Be Consistent with Data Typing

When you draw an analog value object, you are given the opportunity to specify the data type. It is possible to specify one data type when you define a point in the database, and then specify a different data type when you draw an analog value object: ControlView won't warn you that you've used two different data types.

Saving Screen Dumps (PDF) Files for System Documentor

The Mouse GRAFIX File menu now contains the item *Save PDF*. Choose this item to save the current Mouse GRAFIX display as a Pixel Dump File (PDF).

If you have saved the PDF image of a Mouse GRAFIX display, the screen appearance will be included in the printout when you document the display by choosing *Mouse GRAFIX Displays* in the Document menu. For more information see the *System Documentor User's Manual*.

Errors in the User's Manual

1. On page 3-5: Examples: Logical Operators. The note at the bottom of the page reads as:
Note: the parameters are essential in the above expression.
This is incorrect. The note **should** read:
Note: the *parentheses* are essential in the above expression.
2. On page 3-30: under "Description", it is stated that a tag description can be used by Tag Status and Mouse GRAFIX displays. In fact, tag descriptions can not be used by Mouse GRAFIX displays.

Data Logger 2.11

Data Logger Snapshots

Data Logger now supports logging on demand with the new DATALOGSNAPSHOT command. There are two uses for this new command:

- With the Event Detector or C-Toolkit option, you can create an event-driven data logger that logs tag values for a model each time the command is invoked.
- For a one-time snapshot — directly from the command line or with the IDENTIFY command in response to an alarm, for example.

Without the DATALOGSNAPSHOT command, Data Logger could be used only for the periodic logging of data; there was no control over how many times a given tag's value was logged.

Defining a Model

The Create Data Logger Model window and Modify Data Logger Model window have a new field, the *Snapshot Only* field.

Figure 23
The Snapshot Only Field

Create DataLogger Model

DataLogger Model Directory: \\ACCESS\\DL
Model Database:

Model Name:

Model Description:

Sample Rate: (seconds) Snapshot Only: ☐

Maximum Number of Files:

Filesize in Kbytes:

When Data File is to be deleted:

% of expression space used: % Number of tags to be logged:

Accept <+> Cancel<Esc>

42039

Important: Specify Yes in the *Snapshot Only* field if this model is to be used only for snapshots, and never for periodic logging. When you specify Yes in the *Snapshot Only* field, the *Sample Rate* field is ignored.

By specifying Yes in the *Snapshot Only* field, you create a model that will not log data when you start it. You'll see why this is useful in the section *Snapshots and Active Models*, later in this release note.

Taking Data Logger Snapshots

There are two ways to take a snapshot of a Data Logger model:

- interactively through the DL Runtime - Model List Browser
- from the command line (or anywhere commands can be issued)

Data Logger can log data from up to 20 models. However, it is not necessary to start a model before you take a snapshot of it. This means that you can take a snapshot of a model even if 20 other models are already logging data.

Important: The appropriate database must be loaded before you can take a snapshot of a Data Logger model.

DL Runtime - Model List Browser

To call up the DL Runtime - Model List Browser, choose *View Data Logger Info* under View in the Actions menu. The following window appears:

Figure 24
The DL Runtime - Model List Browser

DL Runtime-Model List Browser						
Show Active	Status	Start	Stop	Find	Stop All	Snapshot
Active	Name	Description				

42045

To take a snapshot of a particular Data Logger model, highlight the model and choose *Snapshot*, then confirm the request.

The Command Line

To take a snapshot of a Data Logger model, at the command line type:

DATALOGSNAPSHOT [*model*] *press Enter*

If no model is specified, the DATALOGSNAPSHOT command calls up the DL Runtime - Model List Browser.

Snapshots and Active Models

The amount of time required to take a snapshot depends on whether the model is active (i.e., has been started).

If the model is active, Data Logger will quickly check that all necessary tags are on scan and record their value in the log file.

If, in contrast, the model is not active, Data Logger must go through all the steps required to start up a model (i.e., verify the model against the database to make sure the model is valid, open the log files, and put the tags on scan). Only then will it check that the tags are on scan and record their value in the log file. When finished, Data Logger must then go through all the steps required to stop a model (i.e., close the log files and take the tags off scan).

Obviously, less time is required to take a snapshot of a model that is active. If you require fast response or are going to be taking many snapshots of a model, as in an event-driven model, you should start the model before you begin taking snapshots. However, if you will just be taking one-time snapshots, then there is no advantage to starting the model first.

Example: Using DATALOGSNAPSHOT with the Event Detector

To create an event-driven data logger model, you would:

1. Define a Data Logger model and specify Yes in the *Snapshot Only* field.
2. Create an event file with at least one event. For that event, specify the expression that will trigger the snapshot in the *Expression* field and add the DATALOGSNAPSHOT command to the *Action* field. (See the *Event Detector User's Manual* for details.)
3. Load the appropriate database.
4. Start the Data Logger model.
5. Start the Event Detector.

Since you specified Yes in the *Snapshot Only* field when you defined the model, no data is logged when you start the model. However the model is active when the Event Detector runs the DATALOGSNAPSHOT command, so the data will be logged quickly.

Example: Using DATALOGSNAPSHOT with Alarming

When defining alarms for a tag, you can specify a command that an operator can execute (using the IDENTIFY command) when the tag goes into alarm. DATALOGSNAPSHOT would be a good candidate for this command.

In this scenario, there would be no need to specify Yes in the *Snapshot Only* field or to start logging the model in advance since this is a one-time snapshot.

Special Notes on Data Logger Release 2.11

Data Logger Export

If you are executing DATALOGEXPORT from the command line and at the same time are using the menu system, make sure to use the /X command line parameter to force the Data Logger export utility to operate in the background.

Reporting 2.11

Special Notes on Reporting Release 2.11

Reporting and Print Capture

Reporting will not produce an error message if it tries to print to a network printer that has not been captured. Thus, if you have configured a report to print and delete and have not first run the CAPTURE command, the report will be generated, will *not* print, and will then delete itself without any error messages.

If you are having problems capturing a network printer (i.e., if the CAPTURE command appears to have worked, but the NOVELL command reveals that the printer hasn't been captured), it may be that your network is not configured properly, or that you have an unsupported version of the Novell software installed.

Errors in the User's Manual

Data Subsets—Source

As stated on page 3-23 of the *Reporting User's Manual*, it is possible to use one data subset as a source for subsequent data subsets. Note, however, that this is true only if the original data subset was an activity or alarm log, *not* a Data Logger model.

Sort Field

Only data subsets created from the alarm or activity log files can be sorted. You can not sort data subsets defined from a Data Logger model.

Trending 2.11

Special Notes on Trending Release 2.11

New Parameter for the TREND Command

The TREND command now accepts an optional parameter:

TREND [*filename*]

[*filename*] is the name of a trend file to edit.

Example: The TREND Command

TREND testplot

Calls up the trend editor containing the current settings for the trend file named testplot.

New Parameter for the PLOT Command

The operator can now override the start time specified in the trend file.

Use the **/START** *start-time* command-line parameter to specify the new start time. The syntax for the start-time is the same as that for the *Start Time* field in the Trend Editor. See the section "Start Time and Date" in Chapter 3, *Defining a Trend Display* in the *ControlView Trending User's Manual* for details of the start-time syntax.

Example: The Start Time Parameter

PLOT salad /START now

Immediately starts the trend display named SALAD.

PLOT salad /START 18:30 /dsalad

At 6:30 pm, the trend display called SALAD will start up, and it will use data from the SALAD Data Logger log file.

Incorrect Numbers on the Trend Axis

Because of rounding errors, Trending does not always display the numbers you would expect along the axis. For example, defining a pen with min = 0, max = 100, and configuring a vertical axis of 4 major divisions will create a plot with the increments 0, 25, 50, 76, 100.

Changing the Time Scale with Ctrl-← and Ctrl-→

If, by using the **Ctrl**-arrow keys, the time scale in Trending is re-scaled by unreasonable amounts, problems will occur. If the **Ctrl**-← is pressed so often that the time/div gets too many years per division, the time/division may be displayed as a negative number. Press **Ctrl**-→ to correct the scale. If the **Ctrl**-→ is pressed so often that the time scale becomes smaller than 0.1 seconds/division, the trend and keyboard may lock up.

Errors in the User's Manual

Trend Scroll Keys

To prevent a trend from scrolling off the window, use the keypad * key. The documentation reads as if you can use the key labeled **Pause**, but this key has no function.



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